

Tseng, Antony

From: Guha, Biswarup <Biswarup.Guha@dep.state.nj.us>
Sent: Thursday, January 09, 2014 9:42 AM
To: Tseng, Antony
Cc: Hirst, Barbara; O'Connor, Rosella T.; Pang, Helen; Locicero, Felix; Nyman, Robert
Subject: RE: HDR HydroQual model training

Antony,

The reason I say that hydrodynamic (ECOM) is not same is based on what James Wands had said in the conference call last year when the project was initiating. He stressed on the fact that the nutrients' and pathogens models was not using the same ECOM and it may not be possible to reproduce the ECOM results that were used for nutrients especially as the code was compiled using very old processor version.

I think it is worth double checking with Robin whether your assumptions that ECOM is the same for nutrients, pathogens and toxics.

Also, the executable files that you are talking about used the makefile which used "pgf77" which is a commercial version of the FORTRAN and we, at least NJDEP, will be using "gfortran" which is a free version that comes with DUBIAN linux systems.

Hope this answers your questions. If not, please call me.

Best Regards,
-Roop.

609-292-1592

From: Tseng, Antony [mailto:Tseng.Antony@epa.gov]
Sent: Thursday, January 09, 2014 8:29 AM
To: Guha, Biswarup
Cc: Hirst, Barbara; O'Connor, Rosella T.; Pang, Helen; Locicero, Felix; Nyman, Robert
Subject: RE: HDR HydroQual model training

Roop,

It is my understanding that the hydrodynamics can be the same for all three, hence one ECOM for all three. The RCA models for the three are separate and found in their respective directories. I'm still digging in but it makes sense to me that the hydrodynamics would be the same (ECOM) and the water quality response would be pollutant category specific (RCA). I don't know why you say that they "were not intended to be shared" or why they "are not the same". TMDLs for all three pollutant category scenarios can be based on one baseline hydrodynamics.

On your drive I included a file called "HDR-HydroQual-20131025.pdf" under the main project directory of "NYNJ_TMDLS". This document provides information on what is on your drive, including:
"Finally, the *HYDRO* folder in the TOXICS runs folder contains hydrodynamic model inputs, source codes, and executable codes to give the user the functionality to develop a hydrodynamic transport condition other than those used previously for TMDL modeling purposes. Anticipated future user training can further address creating or modifying hydrodynamic transport, if this feature is desired. It should be noted that, due to the use of several generations of processors and compilers over twelve years of model development, it is not be possible to obtain an exact match of the existing hydrodynamic model outputs provided on the USB drive."

As far as talking to Robin, it's up to Bob but I have no objections.

- Antony

From: Guha, Biswarup [<mailto:Biswarup.Guha@dep.state.nj.us>]
Sent: Wednesday, January 08, 2014 4:59 PM
To: Nyman, Robert
Cc: Hirst, Barbara; O'Connor, Rosella T.; Tseng, Antony; Pang, Helen
Subject: RE: HDR HydroQual model training

Hi Bob,

I got the virtual box installed with HDR's (Jim Hallden) help. We were on the phone for about an hour, possibly a little over.

Just wanted to check with you if you have ok with what was included in file transfer before the training. Also, taking this opportunity to share my observations.

Were ECOM codes for the nutrient and the pathogen models supposed to be included in the package? We need them also if they were not intended to be shared.

I was hoping to run the ECOM and compare to the results to see if they differ and compile questions during the training if we had any. There are separate ECOMs for nutrient, pathogen and toxics with possibly different versions of codes. They are not the same.

As Antony pointed out, there are ECOM Codes under TOXICS directory. However, there are no ECOM code directory for the pathogens and nutrients. I wanted to run the ECOM and RCA for the pathogen and nutrients at least before the training as I think that there will be differences in the results when rerun but want to check how different they are. I have run ECOM/RCA before and I do not need any instructions for this but need to know which set of files/codes are used for which results. It takes a few days Can I talk to Robin about verifying which Hydro Code I should use for pathogens and nutrients?

I was expecting the ECOM codes to be organized the same way as the water quality (RCA) codes.

Best Regards,
-Roop.

609-292-1592

From: Tseng, Antony [<mailto:Tseng.Antony@epa.gov>]
Sent: Tuesday, December 24, 2013 2:48 PM
To: Guha, Biswarup
Cc: Hirst, Barbara; Locicero, Felix; O'Connor, Rosella T.
Subject: RE: HDR HydroQual model training

Roop,

I don't know yet. However, it was my understanding that you can change the scenarios by editing the input text files that you see in the HYDRO folders. I don't know which input files are the ones for WPCP or CSO discharge volume alterations since we had not had the training yet and this is my first look at the inside of these models. I could be wrong but I'm not sure if I'm right either at the moment.

But that wasn't your question. I will have to dig more into it and get back to you.

- Antony

From: Guha, Biswarup [<mailto:Biswarup.Guha@dep.state.nj.us>]
Sent: Tuesday, December 24, 2013 2:08 PM
To: Tseng, Antony
Cc: Hirst, Barbara
Subject: RE: HDR HydroQual model training

Those are the model output, not the ECOM codes to run. E.g In "NYNJ_TMDLS\DO-NUTRIENTS\CODE", the Water quality codes are there. Similarly, was trying to find the ECOM codes to run the HYDRO as well. As far as I remember, James Wands said that the hydrodynamics were run pretty long ago, so he wasn't sure if the hydrodynamic could be reproduced. However, if we want to rerun a scenario which includes WPCP or CSO discharge volume alterations, the hydrodynamic should be rerun with the changes in the discharges. That's why I wanted to determine if we can reproduce the transport files.

Best Regards,
-Roop.

609-292-1592

From: Tseng, Antony [<mailto:Tseng.Antony@epa.gov>]
Sent: Tuesday, December 24, 2013 2:04 PM
To: Guha, Biswarup
Subject: RE: HDR HydroQual model training

Roop,

HYDRO folder at the scenario level or higher contains the hydrodynamic transport.

- Antony

From: Guha, Biswarup [<mailto:Biswarup.Guha@dep.state.nj.us>]
Sent: Tuesday, December 24, 2013 1:32 PM
To: Tseng, Antony
Subject: RE: HDR HydroQual model training

Antony,

Got the package. Thanks!

I couldn't find the ECOM codes (hydrodynamic). Do you see them?

Best Regards,
-Roop.

609-292-1592

From: Tseng, Antony [<mailto:Tseng.Antony@epa.gov>]
Sent: Tuesday, December 24, 2013 9:13 AM
To: Guha, Biswarup

Cc: Hirst, Barbara; Nyman, Robert; O'Connor, Rosella T.; Locicero, Felix
Subject: RE: HDR HydroQual model training

Roop,

FYI according to the results using the tracking number, NJDEP should have it already:
<http://wwwapps.ups.com/WebTracking/track?track=yes&trackNums=1Z1327350346071954>

It will be in a box addressed to Barbara Hirst. The drive also includes the administrative record for the entire project in a directory with that name.

Merry Christmas,
- Antony

From: Guha, Biswarup [<mailto:Biswarup.Guha@dep.state.nj.us>]
Sent: Tuesday, December 24, 2013 9:10 AM
To: Tseng, Antony
Cc: Hirst, Barbara; Nyman, Robert; O'Connor, Rosella T.; Locicero, Felix
Subject: RE: HDR HydroQual model training

Thanks for the quick response, Antony.

We will have to work with the limitations posed by the IT rules obviously. Looking forward to getting the package. Thanks for your patience with my questions. Let me know when, whom and how I should contact HydroQual if there's any need to do so. When I estimated the time required for HQI's assistance, I anticipated some time for the installation of VBOX as well.

Happy holidays and merry Christmas!

Cheers!

Best Regards,
-Roop.

609-292-1592

From: Tseng, Antony [<mailto:Tseng.Antony@epa.gov>]
Sent: Tuesday, December 24, 2013 9:00 AM
To: Guha, Biswarup
Cc: Hirst, Barbara; Nyman, Robert; O'Connor, Rosella T.; Locicero, Felix
Subject: RE: HDR HydroQual model training

Roop,

I did include a notes.txt file on the external drive I sent back to you that includes the versions of LINUX that are said to be compatible with the models. These operating systems are: OpenSuse 12.3 64bit; Mageia 3, 64bit; and Debian 7.1, 64 bit. I also included other documentation regarding desired hardware requirements.

However with regards to the contract, it was very limited and restricted in scope to remain consistent with our rules. As I mentioned before, we were not allowed to install the virtual box (VBOX) and by default I cannot contract work to produce instructions to do something I'm not allowed to do. Therefore, I am not going to be able to be much help trying

to answer your VBOX questions. I would gather perhaps that your IT folks can probably guide you on the installation of a LINUX operating system in a configuration that would be consistent with their setup and security.

Regardless, I just sent an email to Bob Nyman if there is tech support available yet under the training vehicle he set up. He may be better at helping you because of the grant that the training was set up under. I believe there was a certain number of hours set up for NJDEP for this purpose. This also would serve as NJDEP's resource to answer questions about the model itself. I will help if I can based on my own novice experience with the model, but I am not going to be the access point for questions to HDR HydroQual.

Merry Christmas,
- Antony

From: Guha, Biswarup [<mailto:Biswarup.Guha@dep.state.nj.us>]
Sent: Monday, December 23, 2013 4:28 PM
To: Tseng, Antony
Cc: Hirst, Barbara; Nyman, Robert; O'Connor, Rosella T.; Locicero, Felix
Subject: RE: HDR HydroQual model training

Hi Antony:

Good afternoon!

Was trying to install the VBOX and had some questions:

1. What operating system (version of LINUX) did HydroQual use when they shared / transferred Virtual box/machine to other states? You specified four names: *Mageia* (www.mageia.org), *OpenSuse* (www.opensuse.org), *Ubuntu* (www.ubuntu.com), and *Debian* (www.debian.org). Confirming this would probably help us avoid issues later on.
2. What type of hard drive should we use while installing VBOX?. There are 6 options: VDI, VMDR, VHD, HDD, QED and QCOW.
3. What type of physical storage on physical hard drive should we choose? Dynamic or static?

Did you say previously that EPA's IT rules prevent getting the installation package as well as instructions from HydroQual? If we can get the instructions, that would save a lot of time rather than googling for answers. I believe HQ has some video-manuals but not sure if they will be helpful without the setup files that they usually provide.

I am assuming that if I have questions regarding the model itself, I will not contact HydroQual directly but email you.

Best Regards and merry christmas,
-Roop.

609-292-1592

-----Original Message-----

From: Tseng, Antony [<mailto:Tseng.Antony@epa.gov>]
Sent: Monday, November 18, 2013 10:06 AM
To: Guha, Biswarup
Cc: Hirst, Barbara; Nyman, Robert; O'Connor, Rosella T.; Locicero, Felix
Subject: RE: HDR HydroQual model training

Roop,

I'm not an IT specialist either but I will say I will be conducting our own EPA test of the model executables in a LINUX cloud at <http://iemhub.org/> by comparing known output files with the output files generated in this LINUX cloud - similar to what I believe you are going to do. EPA has a relationship with iemHUB and it was the only viable solution for EPA to have access to a LINUX environment so that EPA would be able to run the models. As you may know, I am expecting the output files to be quite expansive so my time for the model verification for EPA will keep me busy.

- Antony

-----Original Message-----

From: Guha, Biswarup [mailto:Biswarup.Guha@dep.state.nj.us]
Sent: Monday, November 18, 2013 9:50 AM
To: Tseng, Antony
Cc: Hirst, Barbara; Nyman, Robert; O'Connor, Rosella T.; Locicero, Felix
Subject: RE: HDR HydroQual model training

Anthony,

Thanks! Per our conference call with Robin/HDR earlier, HDR was ok with providing some technical assistance with installing the virtual machine (VM) and I believe they may already have some videos showing the steps to install the "VM". I am not a IT specialist so may be wrong, but I thought it is critical that the configurations (e.g. associated FORTRAN compilers etc.) where they tested SWEM be identical in order to reproduce the results. Would that be available at the least? The VM can be downloaded at our end as you indicated.

Thanks for your continued assistance.

Regards,
Roop.

From: Tseng, Antony [Tseng.Antony@epa.gov]
Sent: Monday, November 18, 2013 9:10 AM
To: Guha, Biswarup
Cc: Hirst, Barbara; Nyman, Robert; O'Connor, Rosella T.; Locicero, Felix
Subject: RE: HDR HydroQual model training

Roop,

I understand - EPA's IT rules have forbidden us from procuring the "virtual machine" setup. However, Linux is distributed royalty-free under the GPL open source licensing system by many vendors such as Mageia (www.mageia.org), OpenSuse (www.opensuse.org), Ubuntu (www.ubuntu.com), and Debian (www.debian.org). Links to the download pages are described on the home pages of these distributions. It is my understanding that the model codes will run on OpenSuse 12.3 64bit, Mageia 3, 64bit, and Debian 7.1, 64 bit which I believe are the latest versions.

It will need to be up to you how you and your IT folks how you want to setup your own Linux environment.

EPA will be providing the model codes.

Thanks,
- Antony

From: Nyman, Robert
Sent: Friday, November 15, 2013 2:27 PM
To: Guha, Biswarup
Cc: Hirst, Barbara; Tseng, Antony
Subject: RE: HDR HydroQual model training

Roop,

Antony is handling the software side, so I'll ask him to respond to you on this request.

Bob

From: Guha, Biswarup [mailto:Biswarup.Guha@dep.state.nj.us]
Sent: Friday, November 15, 2013 2:17 PM
To: Nyman, Robert
Cc: Hirst, Barbara
Subject: RE: HDR HydroQual model training
Importance: High

Hi Bob:

Good afternoon!

For the HDR / HydroQual training in February, I was wondering if HDR can provide us with the software requiring installation (Virtual machine) sufficiently ahead of the training so that I can go through the new time-consuming procedures which have been imposed on us by Office of Information Resources Management (OIRM) at DEP. I can provide with the external hard drives whenever HDR is ready. Please let me know and I will plan accordingly.

Best Regards,
-Roop.

609-292-1592

-----Original Appointment-----

From: Nyman, Robert [mailto:Nyman.Robert@epa.gov]
Sent: Tuesday, October 29, 2013 4:09 PM
To: Nyman, Robert; Guha, Biswarup; Pang, Helen; Robert Capowski; Angus Eaton; Remnek, Alexandre; O'Connor, Rosella T.; Locicero, Felix; Gaylord, Brent; Lorraine Holdridge
Cc: Jeff Myers; Sherman, Clay; Balla, Richard
Subject: HDR HydroQual model training
When: Tuesday, February 04, 2014 9:00 AM-4:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where:

When: Tuesday, February 04, 2014 9:00 AM-4:00 PM (UTC-05:00) Eastern Time (US & Canada).

Note: The GMT offset above does not reflect daylight saving time adjustments.

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Tuesday February 4, 2014 from 9:00 - 4:00 has been selected for the 6 hour harbor model training session that will be run by HDR HydroQual.

Further information about accessing the webinar training and preparation materials will be communicated to you prior to the meeting.

Thanks, Bob

Robert Nyman
New York-New Jersey Harbor & Estuary Program U.S. Environmental Protection Agency
290 Broadway, 24th Floor
New York, NY 10007
212-637-3809